

[54] **BEZIER SPLINE TO QUADRATIC
POLYNOMIAL FRAGMENT CONVERSION**[75] Inventors: **Kia Siverbrook**, Woollahra; **Simon R. Walmsley**, Epping; **Jim Mulhearn**, Eastwood; **Vincenzo A. L. Liguori**, Mosman, all of Australia[73] Assignees: **Canon Kabushiki Kaisha**, Tokyo, Japan; **Canon Information Systems Research Australia Pty Limited**, New South Wales, Australia

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[57] **ABSTRACT**

Method and apparatus for converting an object of a computerized graphics system defined by a plurality of spline formats into a corresponding object defined by a plurality of quadratic polynomial fragments (QPF). The method and apparatus include, for each spline of the object, selecting start and end points on the spline and designating the selected start and end points as control start and end points on the corresponding QPF, determining from the control points of the spline coefficients of a quadratic polynomial defining the QPF. The coefficients of the quadratic polynomial are used to determine if an error between the spline and the quadratic polynomial is below a predetermined level. In the case the error is below a predetermined level, QPF data describing the quadratic polynomial is determined from the coefficients of the quadratic polynomial.

22 Claims, 8 Drawing Sheets

